AGENDA ITEM #2: EMISSION INVENTORY AND MODELING UPDATE

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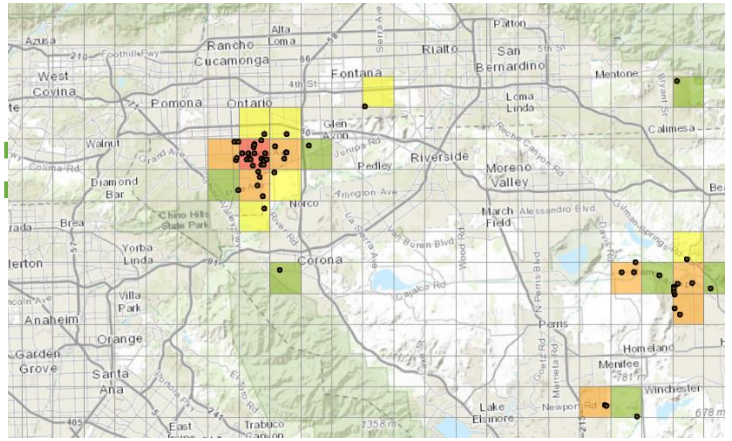
Air Quality Modeling/Emissions Inventory

Emission Inventory: Mobile Source

- Received Proposed Final 2016 RTP/SCS data in April 5th.
  - Travel Activity Data for base and future landmark years
  - Socio Economic Data to project emissions for future years.
  - The future landmark years are 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2025, 2026, and 2031.
- The differences from the draft version delivered in October 2015 are insignificant
  - Less than 1% in growth factors
  - Less than 1% in VMT for the South Coast Basin

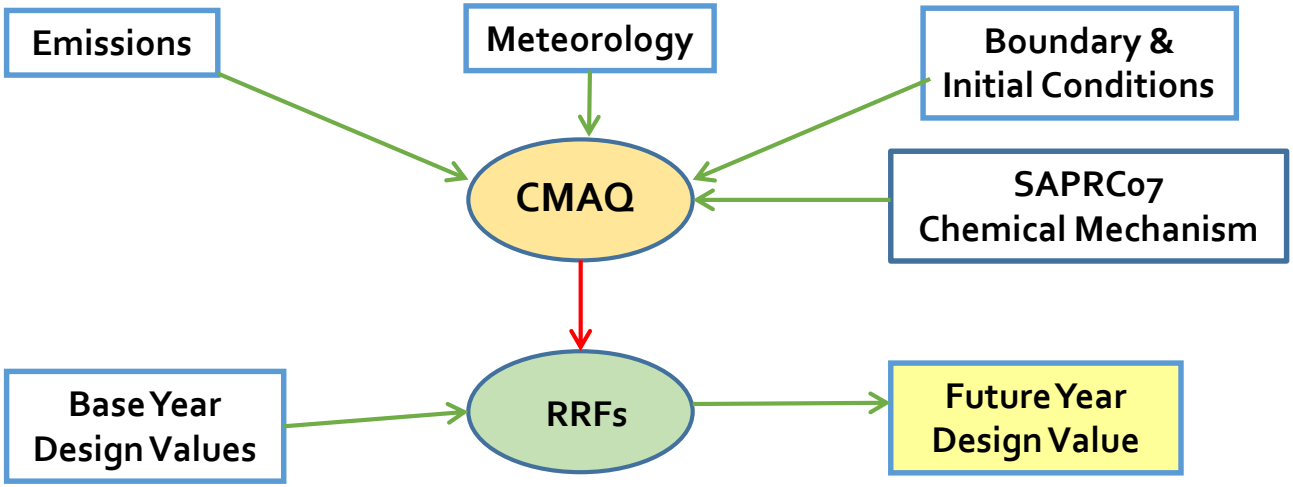
Emission Inventory:
Stationary Sources



- Sources associated with Natural Gas and L.P.G. combustion
  - Approximately 4 TPD of less NOx in 2031
- NH_3 emissions from Dairy Cattle have been revised
  Removed double counting associated with Dairy Farms
  (~2.6 TPD less in 2012)
- VOC emitted from mulch composting were added
  (2.97 TPD more in 2012)
- NOx reductions associated with RECLAIM shave approved in December 2015 governing board meeting
  - 12TPD of NOx reduction by 2022

How to estimate Carrying Capacity: Ozone Isopleth

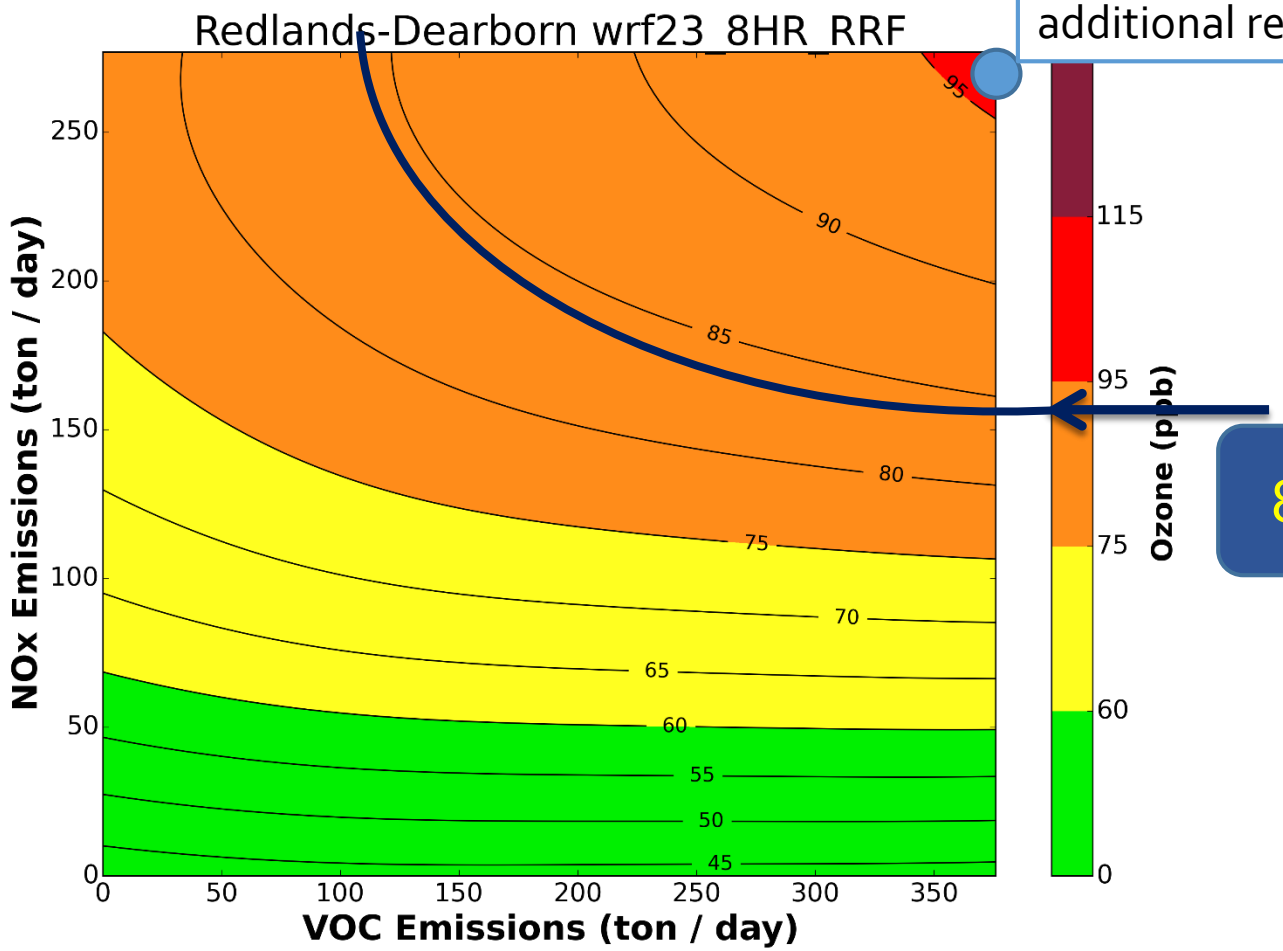
- Regional Modeling



- The ozone isopleth based on
  - 36 model simulations:
  - 153 modeling days per simulation
  - 25-30 minutes per simulation day
  - Between 2280 and 2736 CPU hours using > 200 processors

Preliminary Ozone (Redlands)

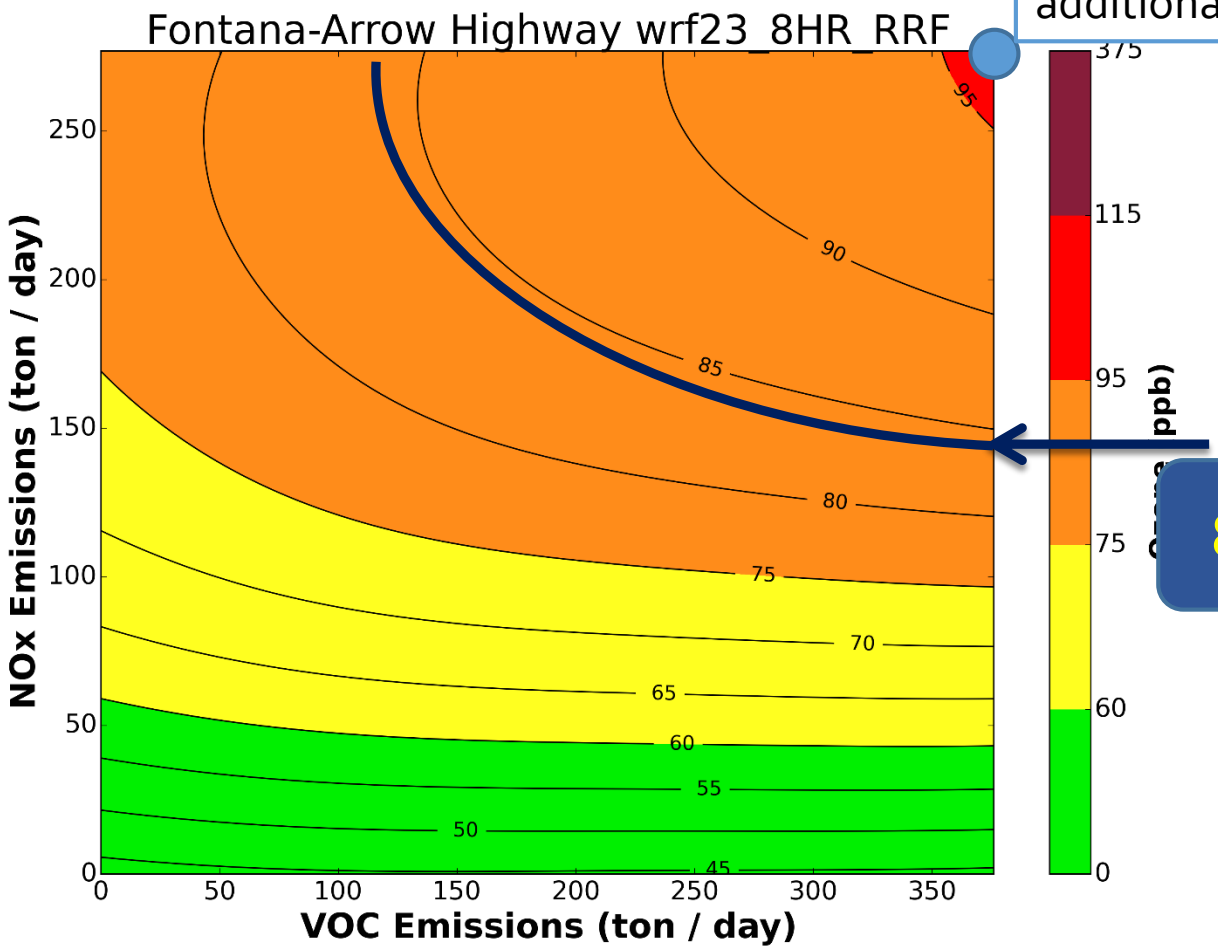
2023 Base with no additional reduction



84.4 ppb

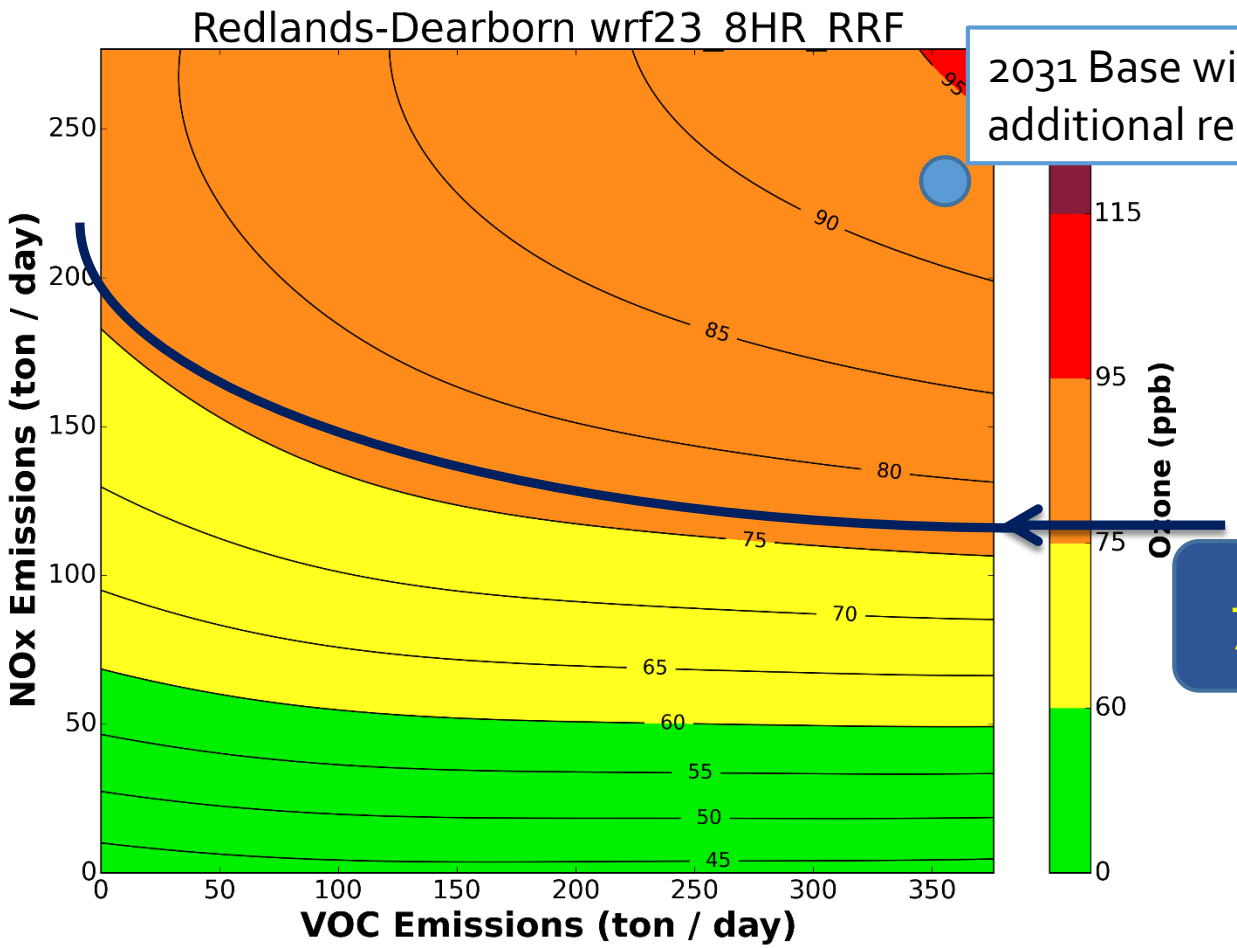
Preliminary Ozone (Fontana)

2023 Base with no additional reduction

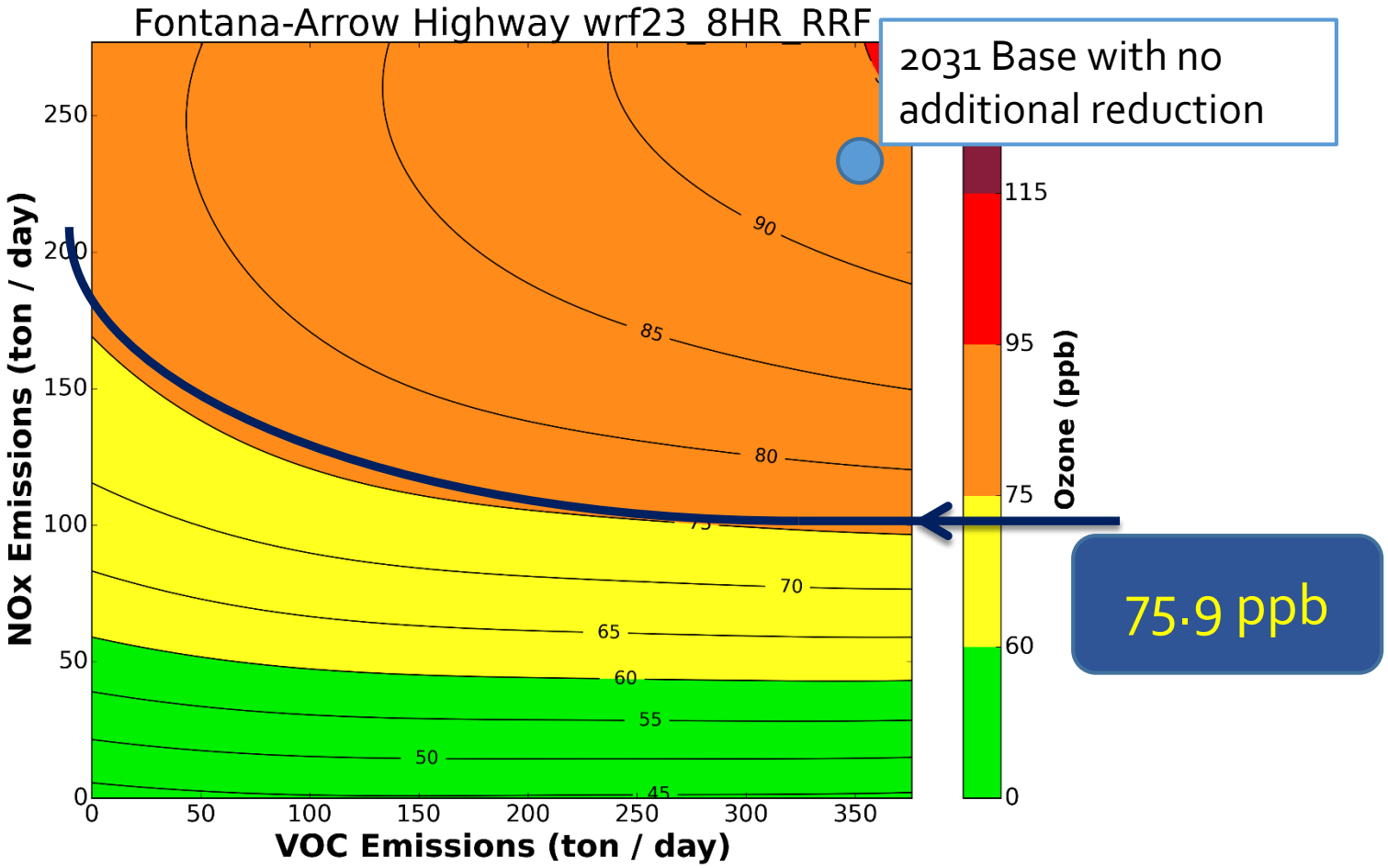


84.4 ppb

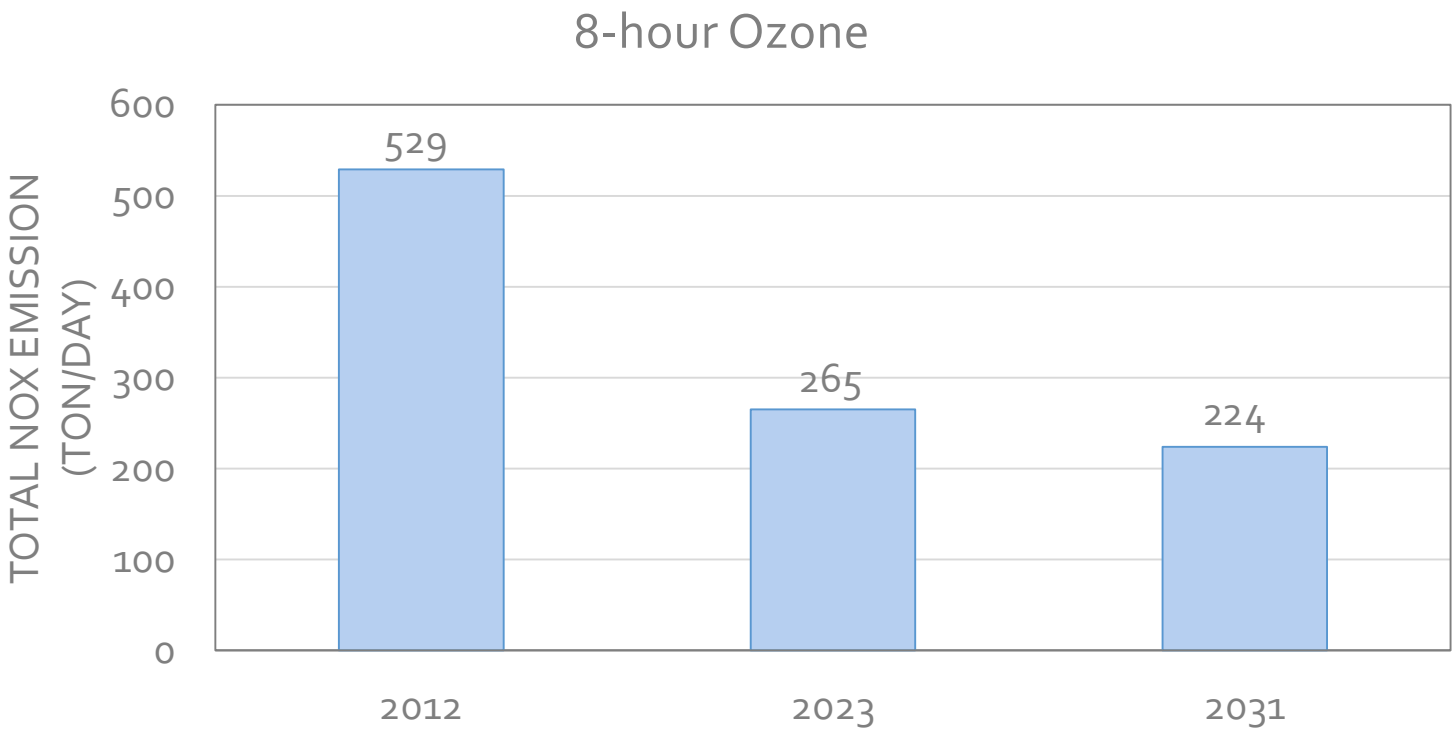
Preliminary Ozone (Redlands)



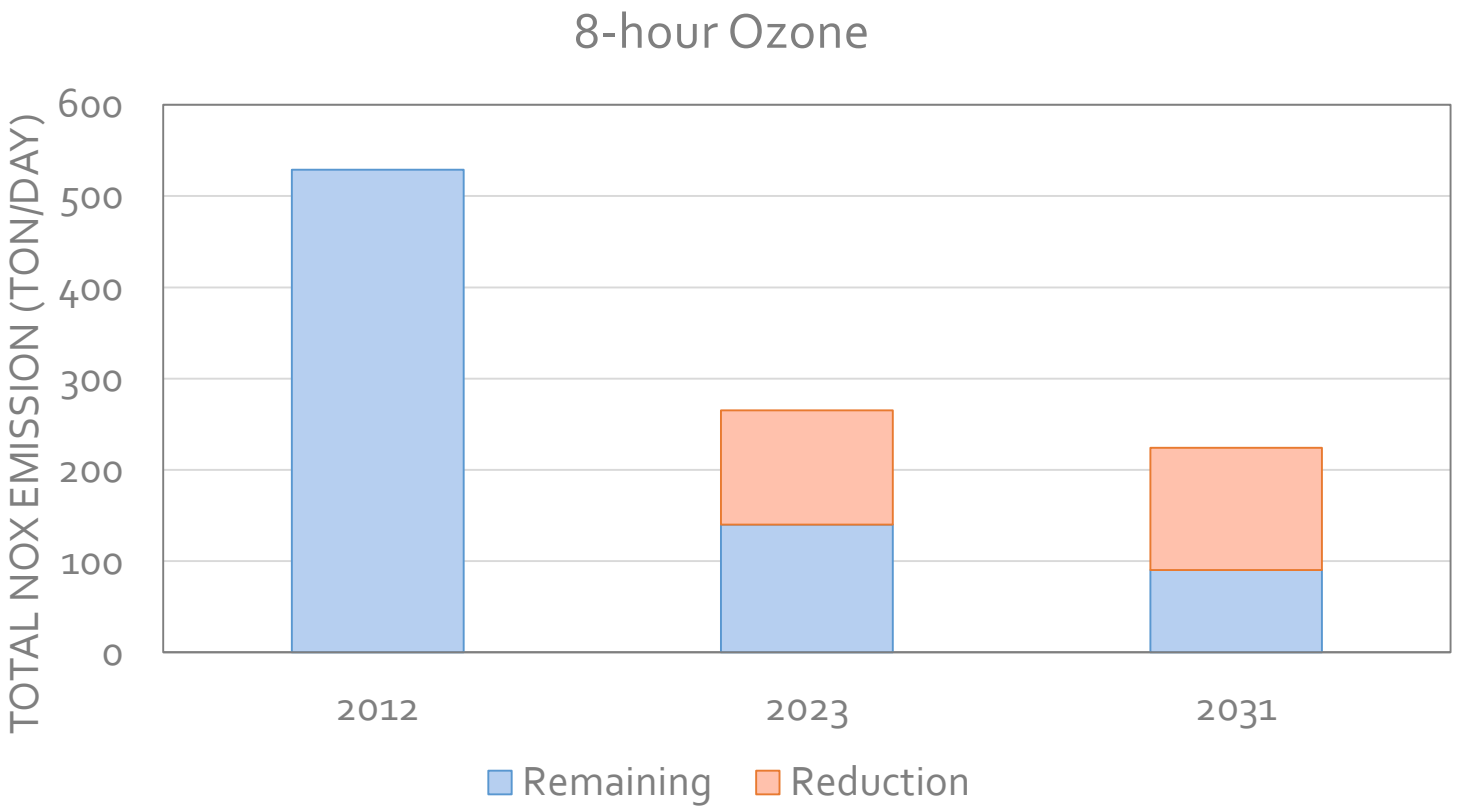
Preliminary Ozone (Fontana)



Carrying Capacity Determination



Carrying Capacity Determination



1-hour Ozone

Stations Exceeding the standard in 2012	Base Year Design Value	2022 Baseline Projection (Using Top10days)
SCLR	0.132	0.116
GLEN	0.132	0.131
UPLA	0.135	0.128
CRES	0.132	0.121
FONT	0.138	0.129
RDLD	0.133	0.121

- Preliminary Carrying Capacity is approximately 190 TPD
- Reduction need to meet the standard is approximately 40 %

PM Design Values at Mira Loma

	Description	24-hr Average (35 ug/m3)	Annual Average (12 ug/m3)
2012	Base Year Design Value	36.6	14.9
2019 baseline	24-hour Attainment	31.7	13.2
2021 baseline	Annual Attainment for Moderate	30.6	13.0
2025 baseline	Annual Attainment for Serious	28.2	12.4
2021 Control	PM control Only	30.0	12.4
2023 50% NOx Reduction	NOx Control Only	23.1	11.1

Ongoing Work

- Update emissions with the new 2016 RTP/SCS projection (No significant changes expected)
- Refining Carrying Capacity
- Developing Attainment Demonstrations
- Evaluating the impact of medium to long range transport, background concentration, and federal sources